

CLAIMS

WHAT IS CLAIMED IS:

- 1 A bracket assembly comprising:
a bracket having a longitudinal main portion and an end portion substantially
5 perpendicular to the main portion;
a latching assembly slidably coupled to the main portion of the bracket and movable
between a first position proximate the end portion of the bracket and a second position away
from the end portion of the bracket; and,
an elastic member coupled to the main portion of the bracket and the latching assem-
10 bly and configured to bias the latching assembly toward to the position.
2. The bracket assembly of claim 1 wherein the end portion of the bracket has at least
one tab that is configured to engage with a rail.
3. The bracket assembly of claim 2 wherein the first end of the latching assembly in-
cludes a latch projection configured to securing the latching assembly to the rail when the
15 latching assembly is in the first position, and a flange coupled to the latch for releasing the
latch from the rail by movement of the latching assembly toward the second position.
4. The bracket assembly of claim 3 wherein the latch projection is configured to fit
within an opening in the rail to secure the latching assembly to the rail.
5. The bracket assembly of claim 1 wherein the elastic member increases in length as
20 the latching assembly moves from its first position to its second position.
6. A bracket assembly for attachment to a vertical rail having an aperture therein, the
bracket assembly comprising:
a bracket having an elongate main portion terminating in a rail engagement portion
extending perpendicularly from the main portion;
25 a rail engagement tab on the rail engagement section configured to be inserted
through the aperture so as to engage the rail;

a latching assembly having a first end and slidably coupled to the bracket main portion for longitudinal translation relative thereto between a first position in which the first end extends through the aperture to abut against the rail engagement section, and a second position in which the first end is displaced away from the rail engagement section and the aperture; and

a biasing element attached between the latching assembly and the bracket main portion so as to apply a biasing force that biases the latching assembly toward the first position.

7. The bracket assembly of Claim 6, further comprising a flange located near the first end of the latching assembly so as to facilitate the movement of the latching assembly from the first position to the second position against the biasing force applied by the biasing element.

8. The bracket assembly of Claim 6, wherein the latching assembly includes an elongate slot, and wherein the latching assembly is slidably retained on the bracket main portion by a peg extending from the main portion through the slot.

9. The bracket assembly of Claim 7, wherein the first end of the latching assembly includes a latch projection configured and located so as to secure the latching assembly to the rail when the latching assembly is in the first position, and wherein the flange is coupled to the latching assembly so as to release the latching assembly from the rail by allowing movement of the latching assembly toward its second position.

10. The bracket assembly of Claim 6, wherein the biasing element is an elastic element.

11. The bracket assembly of Claim 10, wherein the elastic element is a spring.

12. An equipment shelf mounting bracket assembly for use in combination with an equipment rack of a type that includes opposing pairs of vertical front and rear rails, the rails having a plurality of through-apertures arranged in groups of three for positioning the shelf at a selected height within the rack, the mounting bracket comprising:

a track assembly, including a pair of elongated, U-shaped, inner and outer tracks, the inner track nesting within the outer track for relative longitudinal telescopic sliding movement therein;

5 means for clamping the inner track to the outer track at a selected length of the track assembly and thereby preventing relative longitudinal movement between the two tracks;

a right-angle flange disposed at each of a respective one of a rear end of the inner track and a front end of the outer track;

10 a pair of elongated, axially symmetrical alignment pins mounted on each of the flanges, each pin having a center and being arranged in inward-facing opposition to a corresponding pin on the opposite flange, and with the centers of the pins in respective ones of the pairs being spaced at a distance that is equal to the distance between respective centers of a first and a third one of the rail apertures in a selected group of three thereof; and,

15 a latching assembly, including a carrier slidably captivated on the outer track for relative longitudinal sliding movement thereon and having a right angle flange at first end thereof, and means for resiliently urging the flange of the carrier toward the front end flange of the outer track.

13. The mounting bracket assembly of claim 12, wherein each of the rail apertures comprises a large square opening, a large round opening having a diameter the same size as the width of the square opening, or a smaller, round, internally threaded opening, and
20 wherein each alignment pin comprises:

a pair of tandem, concentric cylinders, a smaller one of the cylinders having a conical leading tip and a diameter sized to fit within one of the smaller, round, internally threaded openings, and a larger one of the cylinders having a shoulder tapering into the smaller cylinder and a diameter sized to fit within one of the large square or round openings.

25 14. The mounting bracket of claim 12, wherein the carrier includes a longitudinal slot, and wherein the carrier is slidably captivated on the outer track by a pair of studs upstanding from the track and extending through the slot.

15. The mounting bracket of claim 14, further comprising a second right angle flange at an end of the carrier opposite to the first end thereof, and wherein the resilient urging

means comprises at least one spring having a first end connected to the second flange of the carrier and a second end connected to one of the upstanding studs of the outer track.

16. The mounting bracket of claim 15, further comprising:

a cam plate slidably captivated on the carrier for relative longitudinal sliding movement thereon; and,

an elongated latching spring captivated between the cam plate and the carrier for longitudinal sliding movement therebetween, the latching spring having a locking tab that is engagable with at least one locking notch in the outer track to prevent longitudinal movement of the carrier thereon.

17. The mounting bracket of claim 16, wherein the cam plate includes a camming surface arranged thereon such that rearward displacement of the cam plate causes the camming surface to engage the locking tab of the locking spring and disengage it from the at least one locking notch, thereby enabling the carrier to move longitudinally on the outer track.

18. The mounting bracket of claim 16, further comprising a spring having a first end attached to the carrier and a second end attached to the cam plate and arranged to return the cam plate to a first position relative to the carrier when the cam plate is displaced from said first position.

19. The mounting bracket of claim 16, wherein each of the carrier and the cam plate have a right-angle push tab disposed at a respective front end thereof.

20. The mounting bracket of claim 12, wherein the means for clamping the inner track to the outer track comprise a finger screw extending through a longitudinal slot in the inner track and threaded into a nut plate disposed on the outer track.